

**A ROTARY PUMP WITH HYDRODYNAMICALLY SUSPENDED IMPELLER**

Abstract of the Disclosure

5 This invention relates to rotary pumps adapted, but  
not exclusively, for use as artificial hearts or  
ventricular assist devices and, in particular, discloses  
in preferred forms a seal-less shaft-less pump featuring  
open or closed (shrouded) impeller blades with the edges  
of the blades used as hydrodynamic thrust bearings and  
with electromagnetic torque provided by the interaction  
10 between magnets embedded in the blades and a rotating  
current pattern generated in coils fixed relative to the  
pump housing.

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